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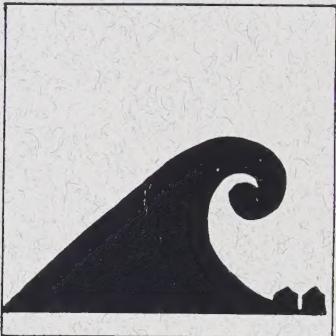
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PUBLIC SAFETY ELEMENT

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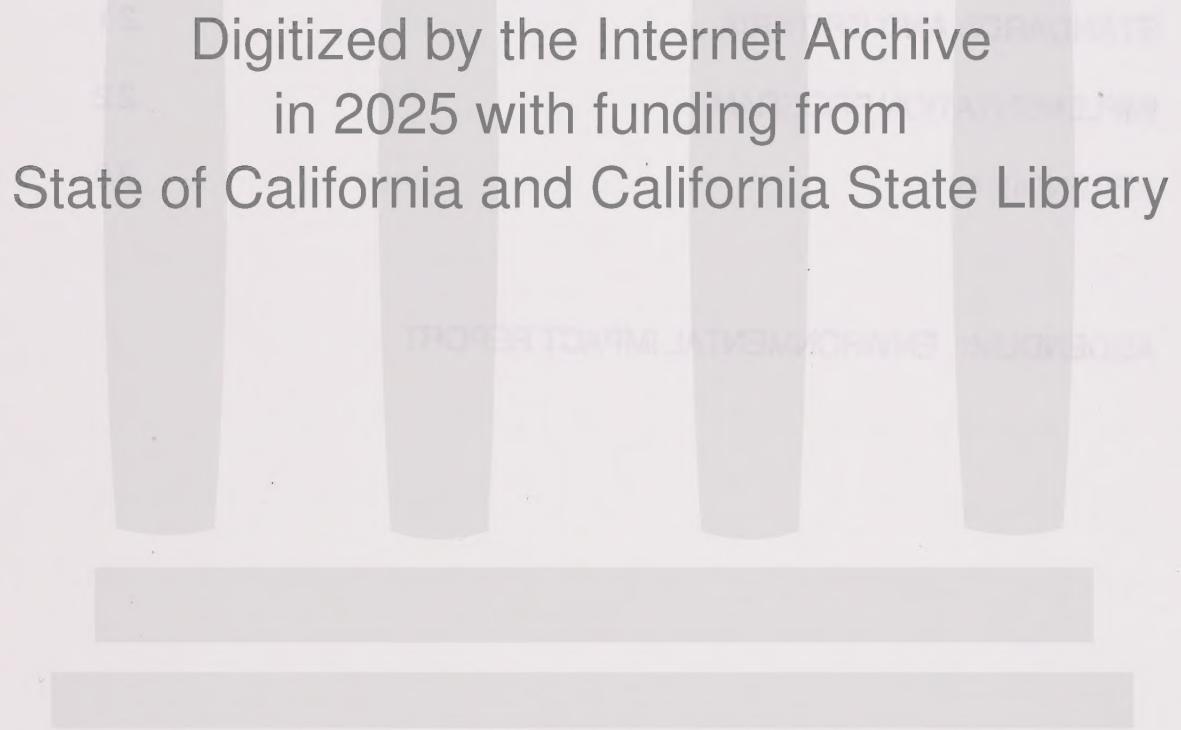
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PUBLIC SAFETY ELEMENT

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ADDENDUM: ENVIRONMENTAL IMPACT REPORT



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INTRODUCTION

This Public Safety Element is restricted in its scope to those elements required by state law: fire and geologic hazard. We recognize this is inadequate for a comprehensive General Plan, but in view of the fact such a plan for the City of Santa Monica is in the process of preparation and a comprehensive form of this element must be prepared in conjunction with the other elements of that plan, it is recommended that this limited version be accepted as an interim measure.

AUTHORITY

The Safety Element is a mandatory element of the General Plan as required by state law. California Government Code Section 65302.1 requires a safety element of all city and county plans as follows:

A safety element for the protection of the community from fire and geologic hazards including features necessary for such protection as evacuation routes, peak load water supply requirements, minimum road widths, clearances around structures, and geologic hazard mapping in areas of known geologic hazards.

PURPOSES AND FEATURES

The purpose of the Public Safety Element is to introduce safety considerations into the planning process. By doing this, loss of life, injury, property damage, economic and social dislocation due to the above mentioned hazards may be held to a minimum.

Its objective is to serve as an official guide for the City Council, Planning Commission, Planning Department staff and concerned citizens while working with the two factors identified in this document which affect the public safety of the community.

RELATIONSHIP TO OTHER ELEMENTS

This Safety Element contributes to developing land use standards and policies. These will relate type and intensity of use to the level of risk from fire and geologic hazards to the effect of development upon that risk, and to the availability of services and facilities to combat them.

The Safety Element also contributes basic standards and requirements to the Circulation element, such as minimum street and alley widths for emergency vehicles. Emergency vehicles access will also impact on the Public Facilities Element, and will have important implications for the Open Space and Conservation Elements.

Inasmuch as the Seismic Safety Element contributes information on the comparative safety of using lands for various purposes, types of

structures, and occupancies, it has a very direct and strong relationship with this element.

Because of its relationship to other elements of the General Plan and because that plan is now being revised, this Safety Element will be amended by a Safety and Public Health Element to be included in the new General Plan.

DEFINITIONS

There are basic terms used in this element which require defining:

Acceptable Risk: The level of risk below which no specific action by local government is deemed to be necessary to protect life and property.

Avoidable Risk: Risk not necessary to take because individual or public goals can be achieved by other means without taking the risk.

Fire Hazard: Any condition or circumstance which contributes to the inception or rapid spread of fire.

Geologic Hazard: Geologic activity, other than seismic events, creating an impact on the safety and welfare of the city residents, such as slope instability, general subsidence, differential settling, erosion, tsunami, seiches and other associated problems.

BACKGROUND

FIRE HAZARDS

The urban environment is, by nature, hazardous to some degree. For one, human and structural density increase the first potential. Within this milieu, individual acts of malice or negligence may compound or aggravate the hazards city residents experience to the level of unacceptability.

Fire hazards in the urban environment are as diverse as the number of different human activities engaged in.

Despite the diversity of dangers common to each activity, all urban structures share a single hazard: increasing building density. This trend toward greater structural density raises the possibility of fire hazards that are inherent in compact growth development of a city of geographically finite size.

Since 1970 high density dwelling units have increased enormously. While single family and duplex residences have decreased by 123 units to 12,118 and two to four unit dwellings have dwindled by 381 to 4,067 units, multi-family structures have increased to 26,744 units, a gain of 3,749 units since 1970.

Industrial density, as a whole, has remained stable in recent years. The exception to this stability is the McDonald-Douglas Aircraft facility. While the land use area is, at present intact, the employment level has steadily declined.

There are 41% more high rise buildings today in Santa Monica than there were ten years ago. The additional fifteen buildings (plus two under construction) are indicative of the high density land use prevalent in the city.

Dollar structural loss, due to fire, has averaged \$806,310 annually during the last four years. This is equivalent to a \$9.00 per capita loss for each citizen. This is but one reason why there should be a comprehensive examination of urban fire hazards.

Fire Hazardous Buildings

A fire hazardous building is one in which faulty electrical wiring, substandard or obsolete heating equipment, inadequate building materials, inadequate design or improper use can contribute to the inception and rapid spread of fire.

Buildings which might fall into this category are: residences built prior to the municipal building code of the last 1920's; one to three story commercial structures having open stairwell construction; industrial facilities which lack fire-safe storage for volatile or insufficient fire suppression systems. With the exception of several older high rise structures, there are no serious fire hazardous buildings in the city to the knowledge of the Building and Fire Department personnel. These hazardous buildings are currently being surveyed to assess the need for corrective measures.

Residential Structures

During the last four years, 67% of the structural fires responded to by the Fire Department occurred in residential occupancies.

Causative factors of these fires, in descending order are: heating and cooking equipment; electrical wiring and appliances; smoking; children and matches.

High Rise Structure

High rise may be defined as any tall building whose height or location exceeds the capacity of rescue equipment (e.g. snorkel truck and ladders) to reach trapped victims from the outside. In Santa Monica this includes buildings over seven stories.

Inasmuch as there is a considerable concentration of people in high rise buildings, these structures present the greater potential fire hazard to human life. Consequently, they require the most stringent fire safety measures.

Equipment limitations and tenant unpreparedness plus the design of the building may inhibit rescue and fire suppression efforts.

Dependence on implicit safety measures to suppress fires (ventilation, elevator, water and light systems) may themselves fail, thus rendering high rise buildings more vulnerable to fire losses. Also, the failure of communication systems could hinder the search for the trapped.

The Fire and Building Department personnel are currently surveying existing high rise buildings for alternative corrective measures that will be required by state law.

Hospitals and Medical Facilities

The danger of fire to hospitals and convalescent homes is two-fold. One, there is the danger of fire to a large dependent patient population. Even at day time staffing levels, personnel might be hard pressed to effectively evacuate everyone. Second, is the importance of the medical facility surviving fire danger, especially emergency medical facilities. The facility is necessary to the continued welfare of the community; it must be preserved and protected.

To insure efficient action during fire emergencies, the hospitals conduct monthly fire drills for their staff under supervision of the Fire Department. Emergency procedure training for convalescent hospital personnel averages once every six months.

There have been no major fires or casualties in any of the medical facilities in the last ten years. The first that have occurred in these facilities have been limited to small linen or kitchen fires.

Indoor Public Facilities

An indoor public facility is an enclosed structure where large groups of people gather. Such structures include, but are not limited to: entertainment and recreational facilities, churches, schools and lodges. Some of these may have been built prior to adoption of the present fire code and may not conform to present standards of wiring, heating or building design.

A major consideration in dealing with fire hazards in these facilities is mass panic in case of fire. This may be caused by the patrons and the staff not being familiar with emergency exits and procedures, loss of orientation due to smoke or lack of visibility. Thus, a small fire while harmless in itself, if not handled properly may cause great numbers of injuries and loss of life.

Commercial Problems

Santa Monica's central business district encompasses the area from Wilshire to Colorado, Ocean Avenue to Lincoln Boulevard and commercial corridors along Wilshire, Santa Monica, Pico, Ocean Park, Main Street, and Montana Avenue.

Inventory of combustible materials (normal load) in these facilities may tax Fire Department operations. Some buildings have large areas, common attics, common basements, removed walls (due to expansion). A few buildings have had their use curtailed (prohibited occupancy of upper floors) due to older style of constructions.

Industrial Fire Hazards

Santa Monica has a diversified light industrial base characterized by electronics assembly, plastics fabrication, light machine work, advanced research facilities, and other manufacturing, storage and distribution facilities. Those industries employing petroleum or chemicals in their operations represent the most recognizable fire hazards. The industrial plants are generally located in the industrial zones. Outside the zone, they are subject to a conditional use permit from the city. New processes, new industries demand continually improving techniques of fire prevention and suppression.

Water System

The city's water system exceeds nearly all fire suppression requirements. Its limitations do not seriously hinder fire suppression ability. The Insurance Service Office (ISO), an organization which establishes water system standards and evaluates fire suppression capabilities, rates the Santa Monica system a single point below Class 1. Class 1 is the highest rating possible. This high rating can contribute to lower insurance costs for home owners and businesses.

The Water Department maintains a 2 1/2 day water reserve in its reservoirs. The ISO's requirement of a five day reserve supply of water will be met by a proposed Municipal Water District feeder line. This proposed line would fulfill the remaining 2 1/2 day reserve requirements and projected increased needs through 2020 A.D.

Fire Department

Santa Monica's Fire Department serves the city with an excellent rescue-paramedic and fire suppression capability. There are four fire stations in Santa Monica. For a staff breakdown by facility, fire zones and first-in engine company, see Appendix I.

The city's Rescue-Paramedic Program involves coordinated services of the Fire Department, the local private ambulance service and the

Santa Monica Hospital. The program is integrated into a county-wide system and is monitored by the Los Angeles County Department of Health Services.

Initial patient care in the field is administered by the Fire Department paramedic pumper crew. While on call, the paramedics are in radio contact with a doctor at the hospital. Under the doctor's direction, the paramedics begin patient care including the injection of drugs and the defibrillation of heart arrest victims. This degree of treatment has until recently been impossible except in a hospital or doctor's office.

When the initial trauma has been controlled, the victim and paramedics are transported to the emergency hospital in ambulances provided by a private ambulance company. At the hospital the patient is transferred directly into specific intensive care units without the necessity for the time-consuming processing formerly necessary.

GEOLOGICAL HAZARDS

The City of Santa Monica is situated atop the bluffs of a marine terrace which, extending inland, merges with the coastal plain and forms a portion of the Los Angeles Basin. The land can be effected by non-seismic geologic hazards. These include: slope instability on the face of the marine terrace; subsidence in some areas of non-compacted fill, and to a small extent, surface erosion of slopes.

Slope Instability

Slope instability is described as the random sloughing off of soil masses from the face of an otherwise stable geologic mass. There are three basic contributing factors to slope failure: surface and subsurface water, geologic structure, and the slope gradient.

The Palisades Park Bluffs have long been plagued by slope instability, with the first recorded slide taking place in 1930. Damage has usually been confined to reduction in the size of Palisades Park and debris on the Pacific Coast Highway.

The cost of these slides in terms of property or aesthetic loss has been impossible to compute. Neither has the dollar cost to taxpayers for clean up, nor can the cost to motorists stopped or delayed from traveling the highway be determined, but these

potential and eventual costs could be high. The risk, however, is that people will be caught in or by a slide with resulting injury or death.

Subsidence

A gradual lowering of the ground elevation due to a decrease in subsurface pressure is called subsidence. It maybe induced by removal of fluids (oil,water) from the substrata; hydrocompaction (infusion of large amounts of water into essentially dry soils, and the resultant compaction); or, decay and collapse of fill material (organic or inorganic) with a corresponding decrease in surface elevation.

Erosion

Removal of soil from an area and its deposition in another, by wind, water or gravity is called erosion. The effects of erosion are intensified with increase in slope gradient, the narrowing of runoff channels, and by removal of ground cover which leaves the soil unprotected to the elements. The consequent alluvium can deposit silt, sand, gravel, even boulders on streets, in storm drains or around buildings.

Some erosion has been noted on the slopes of property near 26th Street and La Mesa Drive. Mitigating measures have been taken to deal with that problem by the concerned property owners.

Flooding

Areas subject to periodic flooding have been reduced from the seven noted in 1954 to none today. Some of the worst areas were: Georgina and 21st Street; Marine and Dewey and 16th Streets; 26th Street between Marguerita and Montana; Lincoln and Pico; Virginia and Stewart. Flood control systems have since eliminated these streets and intersections as problem areas. The last to be corrected was the intersection at Colorado and 14th Street in 1972. Since that time there have been no significant flood incidents in the city.

Santa Monica Emergency Plan

The city has prepared an emergency plan to safeguard the lives and property of the citizens of Santa Monica in the event of natural and man-made disaster. This plan provides a system of continuing Municipal Government. It specifies procedures to follow for increased readiness in case of disaster. The plan provides: warning systems; a coordinated, county wide broadcasting system for the

public; a centralized direction and control of the emergency organizations; a tie-in to the state wide "911" emergency dialing system to unify disaster reporting efforts.

At present the city lacks a permanent, well-equipped emergency headquarters facility capable of housing requisite personnel for protection against fallout, earthquake, and other disasters according to Federal standards. Also lacking is a centralized communications system.

Emergency preparedness is not only a local, but state responsibility. As with the state wide mutual aid agreements among fire departments, the emergency plan is also keyed to state participation. (California Emergency Plan, Part 1, I.D.G.)

In addition, an emergency evacuation plan has been prepared, should evacuation of the citizenry become necessary.

ASSESSMENT OF PRESENT HAZARD ABATEMENT PROGRAMS

An assessment of existing hazard abatement programs is necessary to determine emergency response capabilities.

FIRE HAZARDS

Different fire hazards require particular suppression techniques to have differing priorities. The following assessment deals with these differences.

Fire Hazardous Buildings

The present inspection program requires an annual inspection of all businesses. At a minimum inspections may be carried out on a spot basis to encourage compliance as often as deemed necessary by Fire Department personnel. Homes and residences of three units or less are not inspected unless a complaint is filed or the owner requests an inspection.

In 1971 an ordinance was passed requiring open stairwells in older residential buildings to be enclosed. Older buildings have had to install smoke sensors and door closers which also reduce fire hazards.

The threat of seriously hazardous buildings has been diminished as a result of continuing inspection by both Fire and Building Departments.

Due to excessive costs and lack of time, it is impossible to inspect every residence even on a periodic basis, the exceptions being a condemned structure or an owner's request for inspection. To alleviate this shortcoming, a request for inspection might become a feature of escrow procedure much like the termite inspection. An Ordinance of this kind is currently before the City Council for consideration.

High Rise Buildings

Multi-story buildings present hazards unique to their construction. In buildings of three stories or less the placement of fire suppression crews and equipment is generally no problem. High rise buildings, even with built-in fire mitigation features, present a greater danger due to the greater numbers of people present in the structure. Not only is it harder to place crews and equipment inside,

but the problem of victim evacuation becomes very difficult. The snorkel equipment has a limited height (seven stories barring building setback) and payload capacity. Fires above the seventh floor are beyond the reach of present exterior rescue equipment. Fire suppression personnel and victims alike would have to rely on smoke towers and/or elevators for escape from fire above this level.

Future rooftop design should confine vent, aerials, and aircraft warning lights to one corner, so as to leave the remainder free for helicopter evacuation of trapped fire victims. High rise owners can satisfy FAA Requirements for helicopter roof top landings by applying for a temporary heliport license.

Consideration should also be given periodically to retroactive legislation governing the mandatory installation of various types of fire preventive and suppressive measures. These might include: smoke sensors, magnetic door closers, fire sprinkler system or other future technological innovations. An ongoing program of practice evacuation should be recurrent in multi-story buildings.

Hospitals and Medical Facilities

Fire training at Saint John's and Santa Monica Hospitals is carried out on a monthly basis. In convalescent hospitals the training averages once every six months. Hospitals and convalescent homes must have emergency backup power generators according to state law. The hospitals in Santa Monica must be built of "class I" materials (concrete, masonry, etc.) to satisfy building codes. Based upon the size of the dependent population, nursing homes are of Type I or Type II construction. Convalescent homes are required to have an indoor fire sprinkler system.

Although both types of facilities are safe, types and qualities of emergency procedures may vary. To insure continued safety, indepth inspections should be continued. Regular fire and disaster drilling keeps the staff prepared for prompt response to actual emergencies.

Indoor Public Facilities and Commercial Structures

These facilities are used by a high density population, who are unfamiliar with evacuation routes or emergency procedures. Therefore, the building must be not only fireproof, but also well designed to speed rapid evacuation in case of emergency. Generally

staff members are not sufficiently trained to constitute a significant secondary disaster relief group.

A conscientious continuing effort should be made toward preparing a facility disaster plan and training for employees to respond in emergency situation.

Industrial Fire Hazards

With few exceptions, the city's industrial facilities have been confined to zones which minimize the potential fire losses. Those located outside these areas do so under existing conditional use permits. These permits provide for the imposition of fire standards on the structure which will reduce the fire hazard to a level of acceptable risk.

Emergency Medical Services

Citizens of any community are subject to various types of life-threatening trauma as the result of accident or sudden illness. Within the City of Santa Monica, several factors are apparent which tend to increase the number of such incidents which can be anticipated. (1) High population density increases the possibility of accident. (2) Traffic congestion and beach-oriented recreation increase the potential for accidents. (3) One of each six residents of the city is 65 years of age and older. The incident rate of sudden trauma associated with heart and circulatory disease is very high in this age group.

The City has for many years provided a program to aid those who are the victims of accident or sudden illness. This program has recently been substantially upgraded by instituting a program of Mobile Intensive Care Units manned by paramedics.

GEOLOGIC HAZARDS

The geologic hazards of concern to Santa Monica are: slope instability, subsidence, and erosion.

Slope Instability

The most recent (1959) exhaustive treatment of the instability of the Palisades Bluffs dealt with slope face failure, major slope failure and graphically represented the underlying geologic structure of the bluffs. Each site of slippage has been mapped.

Since this 1959 report, records of further slide activity have been sketchy. A brief listing between 1957 and 1965 showed five recorded slides and gave the location for each. No further information concerning slide activity could be located, although there has been additional activity since 1965. Up-to-date records could be useful in predicting the location of future slope failure when coupled with other geologic and technical data.

While a number of mitigating alternatives have been considered, almost all have been rejected as not feasible either economically or technically. Although the rapid mass wastage of 500 cubic yards of soil poses a certain hazard, it should be noted that only one fatality in the last 40 years can be directly attributed to slope instability (and that outside the city's jurisdiction).

Subsidence

Subsidence has shown itself to be a hazard on two sites of uncompacted fill within municipal boundaries: the former Higgins Brick Pits and the former Beverly Hills City Dump. Subsidence has also been reported near the older of the two Franklin Hill Reservoirs.

The gaseous results of decomposing waste have seeped through the ground to effect buildings already erected in proximity to the site. Exhaust fans are necessary to remove this noxious gas which has passed through subsoil and foundation walls into the structure.

Erosion

Other than the Palisades Park Bluffs, there is no significant erosion problem in Santa Monica.

A complete geologic mapping program would be an asset to the city. It would assist a number of departments in the performance of their duty.

Flooding

There are no habitual flood zones in the city at present. Areas which might be affected by a severe flood, such as the sewage pumping station, are being improved to function throughout such a crisis.

Santa Monica Emergency Plan

The Emergency Plan is prepared by the city under the direction of the State Office of Emergency Services. The plan deals with mitigating programs, responsibility, procedures and accountability in case of a

disaster such as an earthquake. The role of municipal personnel in such a disaster is also specified.

The lack of adequate emergency headquarters, and the need for a single unified communications system, may provide the opportunity for a combined solution. If a facility, designed to accommodate both, were prepared according to Federal standards for such an installation, Federal monies might be obtained to offset the City's capital expense. A centralized communication system, staffed by trained communications experts could route calls to the appropriate department and at the same time maintain an overview of emergency situation. The City is currently studying this alternative.

The City's Emergency Plan establishes an evacuation plan (page 13) which designates escape corridors to be used in case an emergency is declared either by Federal, State or local authorities. The plan maximizes both coastal and inland streets to accomplish evacuation.

An emergency situation, i.e., earthquake, atomic attack, will place tremendous strains on people and systems. Unless municipal personnel are prepared by practice and with adequate facilities, administration of city government may be exceeded by disaster demands.

GOALS AND OBJECTIVES

Efforts can be productively undertaken to prevent or mitigate the consequences of safety hazards resulting from fire or geologic hazards in Santa Monica. The primary goal of this Safety Element is to provide a physically safe community for the citizens and their possessions as regards fire and geologic hazards and ensure the development and maintenance of facilities and organizations necessary to ensure continued safety.

In order to move towards accomplishing this primary goal, the following objectives are established:

1. Provide quality fire and geologic hazard protection for all residents and visitors in Santa Monica and for business and residential properties.
2. Insure prompt treatment of injured and acutely ill through trained and readily accessible emergency personnel and equipment.
3. Insure that building codes contain adequate measures to prevent fire.

STATEMENT OF POLICIES

Policies must be implemented through present government programs and personnel if the stated goals are to be achieved.

These policies are:

Determine and actively administer standards and criteria to lower risk factors of fire and geologic hazard to tolerable levels.

Seek to better methods for dealing with multi-story and large area buildings with respect to preparedness, rescue, fire prevention and suppression.

Sponsor further investigation of geologic and fire safety.

Investigate and support the use of improved fire suppression and prevention techniques.

Continue to consider safety aspects in approving building permits, conditional use permits, variances, zone changes and Tentative Tract Maps.

Building and Fire codes should be periodically up-dated. The City should encourage participation of its personnel in the conference and committee work necessary to keep new codes abreast of future technological advances and innovations.

STANDARDS AND CRITERIA

Safety standards and criteria are established as a basis for comparison in measuring unacceptable levels of risk. Responsibility for establishing these criteria and standards resides in the City Council. While the State establishes some of these standards, the municipality usually enforces both the State's and its own.

Standards are embodied in various codes and ordinances, such as:

Building code

Fire code

Zoning ordinance

State safety code

Building standards are contained in the building and fire codes. Land development standards are found in the zoning ordinance, the fire and other codes.

Criteria stresses the achievement of excellence or an ideal state beyond a framework of minimum standards. These safety criteria must be decided by members of the City Council.

IMPLEMENTATION PROGRAM

Implementation is accomplished through programs developed in response to adopted policies, ultimately bringing about realization of the stated goals and objectives.

EXISTING PROGRAMS

At different levels of Government various programs for implementing policies, objectives, and goals have been established. These may be divided by jurisdiction as follows:

Municipal

- Building code
- Zoning ordinance
- Fire prevention and suppression
- Taxation
- Contingency disaster plan

State

- Emergency fire and disaster aid plan
- Water distribution projects
- Identification and mapping of geologic hazards
- State funds

Federal

- Revenue Sharing
- United State Geologic Survey Mapping
- Federal Funds

ACTION PROGRAM

Contained in this section are the ongoing action priorities, as well as the short, medium and long range action, needed to fulfill the policies of the Safety Element.

On-Going Action Priorities

By establishing implementational priorities based on identified problems, coordinated with existing programs, the greatest use can be made of present assets and opportunities in resolving safety problems.

Criteria Used in Setting up Priorities

Due to limited assets the city must pinpoint the most crucial problems and act on these first. This action should be based on:

- Clear and present danger to life or property.
- Danger to high density or dependent populations.
- Opportunities, which if not seized, are lost.

On-Going Action Response

- Fire hazardous buildings
- High occupancy structures
- Dependent populations
- Commercial occupancy
- Industrial fire hazards
- Emergency response ability
- Geologic hazards
- Residential fires

ACTION RECOMMENDATIONS

Short Range Recommendations

Public Relations Programs encouraging voluntary fire inspections of single family dwellings and apartments as well as industrial, commercial and other structures. Obtain Council approval to designate special days in each month (instead of annually during the month of May, as at present) for selected geographic areas, when city sanitation trucks will make a special run to pick up anything and dispose of it, thus reducing the fire hazard in each neighborhood.

Recommend that Council pass a requirement for formation of an emergency action plan by owners of structures three stories or more in height. Plans should contain:

Emergency response plan prepared by building manager and submitted to the Fire Chief for review.

Training procedures for the building's tenants that will prepare them to function in consort with fire and police personnel in disaster response.

Institute a program of continuously updating a geologic hazards map for new anomalies. Not only should sites of activity be mapped, but in the case of slides, quantity of debris, duration of cleanup and cost and number of injured should be noted for future reference.

Construct a combined, centralized communications-dispatch system and an emergency shelter facility which meet Federal guidelines.

Medium and Long Range Action Recommendations

Require, through the Building Department, all sites in identified geologically hazardous areas to be certified safe by a soil engineer before a building permit is granted.

Plan and implement a master plan for fire protection. The plan to establish the calculated level of public fire protection to be furnished by the city. The plan will also provide that these structures within the city which, by reason of design, ground area, height, or use, exceed the programmed capability of the fire force, shall be required to install fire limiting features which will reduce the fire potential to the level within the capability of the fire forces.

Governmental Roles and Responsibilities

In order to successfully attain the stated goals of the safety element, the various roles played by each level of government must be identified and assessed.

One of the important responsibilities of municipal government is to identify the safety hazards within its boundaries and take the kind of responsible action only a vital local authority can to ameliorate a situation of unacceptably high risk. This may be accomplished through a vigorous fire prevention program and a building department attuned to an awareness of geologic hazards and a possible program of mitigation measures.

Other communities can provide additional fire suppression equipment and personnel in the event of a major fire or other disaster which might exceed the capacity of Santa Monica's municipal forces.

The state has set forth guidelines for mutual aid agreements between communities to augment their disaster response abilities. The state has a quick response structure organized to provide maximum utilization of available manpower and material in case of major fire disasters.

The federal government's major opportunities lie in its ability to aid, through revenue sharing. Federal guidelines are embodied in FHA and VA requirements and through an information dissemination service.

Constraints, Capabilities and Feasibilities

The above considerations must be taken into account in order to achieve implementation of the element.

Constraints

Legal limitations on the city's authority to implement some policies.

Limit on funds available to pay for corrective programs.

Opposition to new programs which might effect property values or maintenance costs.

Diverging views of just what constitutes levels of acceptable risk.

Capabilities

Technical competence for hazard problem resolution or mitigation.

Excellently manned and equipped fire suppression and rescue resources.

Wide public knowledge of disasters which have destroyed lives and property.

Feasibility

The frame work for public safety improvement already exists. Politically and socially the advantages of these programs are well recognized. Most of the proposed action could be implemented through the existing programs and so avoid the high cost of beginning a new program.

Success of implementation rests on the mutual awareness and cooperation of the different concerned departments. By establishing priorities which coincide in time and type of implementation, the concentrated efforts of many departments can be brought to bear on a single problem in a coordinated, unified fashion.

Costs of Funding

Both private and public sectors will be affected by the implementation of this element. The cost of additional manpower for the Fire Prevention Bureau, Building Department and other involved departments would be the greatest outlay of new funds. A rearrangement of priorities would cover some of the cost with the rest coming from tax revenues, revenue sharing, community

development funds and federal grants. Exact costs have not been figured for want of specific program information.

The private costs of implementation would be borne by those most affected, generally, the owners of properties, requiring added protection. Perhaps low or non-interest notes funded by revenue sharing might help offset the cost of meeting any new standards imposed on existing properties.

FIRE DEPARTMENT

1	Fire Chief
5	Battalion Chiefs
20	Fire Captains
18	Engineers
46	Firemen
5	Dispatchers
1	Fire Alarm Supervisor
1	Mechanic Foreman
2	Secretaries

Personnel requirements demand 3 1/4 men for each fire fighting position on a 24 hours basis.

Headquarters at 1444 - 7th Street houses:

1	Pumper Company - Paramedic capability
1	Snorkel Unit
1	Ladder Company
1	Utility Vehicle (Rescue & Salvage)
	Fire Chief
	Fire Prevention Bureau Staff
	Secretarial Staff

220 Hollister houses:

1	Pumper Company - Paramedic capability, April 1975
1	Mechanic

1302 - 19th Street houses:

1	Pumper Company - Paramedic Capability
1	Ladder Company

2502 - 25th Street houses:

1	Pumper Company
1	Aircraft Crash Unit

In order to assure minimum response time (from alarm to arrival), the Fire Department has established 11 running districts. These districts specify which station is responsible for sending the first "on the scene" company of fire fighters and which sends the second or backup company.

To reduce the impact of fire to a minimum, the city has been divided into three fire zones. These govern types of construction material used in each zone. Zone I requires use of steel, concrete or masonry and fire doors, for example. Zone III is residential and allows stucco or frame construction, no fire doors required.

APPENDIX 1

SUMMARY

The purpose of this Environmental Impact Report (EIR) is to identify courses of action which may effect our living space in a detrimental fashion.

The EIR suggests alternative courses of action which may reduce negative impacts.

It also deals with irreversible impacts which occur, should the proposed action be implemented.

Finally, it identifies the growth inducing impacts of the proposed action.

Section 65302 of the California Government Code mandates four new elements to the General Plan Process. One of these is in the Public Safety Element. This element attempts to designate known fire and nonseismic geologic hazards. Having identified these hazards, policies and goals are established to provide a cohesive program of hazard abatement. While these programs are designed to ameliorate the quality of life and reduce risks to life and property, they may inadvertently have an impact on our environment. This Environmental Impact Report will attempt to assess the results of hazard abatement program implementation and identify short and long term effects which may result.

The Public Safety Element is inherently general in its nature due to the comprehensive approach it takes. It therefore need only be accompanied by an environmental impact report containing the same degree of specificity.

METHODOLOGY

It was first necessary to identify and weigh the influence that potential growth might have on the safety and development of the suggested programs of hazard abatement. Four alternative policy sets were selected on a basis of degree of improvement to the total safety framework. "No action" was considered and adopted only on a contingency of further study. It is doubtful that the city can achieve a status of total elimination of all safety hazards.

In designating policies the three considerations were:

Extent of problem to be resolved.

Degree of action necessary to mitigate the problem.

Feasibility of proposed action.

II. ENVIRONMENTAL SETTING

OVERVIEW

Santa Monica's topography is that of an elevated marine terrace. Demarcation is sharpest where the terrace rises from the shore to form the bluffs of Palisades Park. Inland and to the north the land slopes upward in a mild gradient to the highest point in the city, elevation 374.4 feet - 114.1 m.

The ocean moderates the climate of Santa Monica. On any given summer day this local may be 10-15F cooler than the inland portion of the Los Angeles Basin. Santa Monica's proximity to the ocean helps it maintain relatively warmer weather during the winter months.

This "Mediterranean" climate has contributed to the choice, by many, of Santa Monica as a place of residence. As a result the city has experienced a steady growth in population. Once a city of primarily single family residences, Santa Monica's housing patterns have altered. Now there are not only large numbers of apartments, but also condominiums are becoming more prevalent. These and other factors indicate intensified land use in the city's way of responding to finite boundaries and increasing population.

Land ownership has become correspondingly more expensive as competition for available land increased. This augmented level of affluence maybe more fully tapped by the city merchants as the additional facilities of the new mall become available. The capturing of a larger share of the goods and services market by Santa Monica will mean that dollars spent here will contribute to greater employment and prosperity of the city's inhabitants.

III. ENVIRONMENTAL IMPACT STATEMENT

This rather terse look at the city shows it to be a vital community, economically and socially. There is potential for growth which, if guided could lead to an improved environment for all.

REGIONAL SETTING

Santa Monica participates in a voluntary association of local governments known as Southern California Association of Governments(SCAG). SCAG acts as a coordinating device among municipal and county governments and as a regional clearing house for some federal funds and programs. Transportation planning is currently one of SCAG's chief concerns.

THE ENVIRONMENTAL IMPACT OF THE PROPOSED ACTIONS

This section will deal with the proposed policies and programs of the safety elements and their direct or indirect impact on the environment of Santa Monica. The scope of possible impact considers the areas of: landforms, sociology, economic, urban development, health/safety, and services. The following measures do not exceed that which is required to insure safety. Extensive cost prohibits excessive safety measures.

LANDFORMS

Slope failure (referring to the bluffs of Palisades Park)
No significant impact will result from implementation of the proposed measures. Further study is required.

Subsidence

In areas of non-compacted fill, no construction should be undertaken unless and until mitigation measures have rendered the site safe.

Mitigating Measures

Loose fill must be excavated and recompacted before construction may begin. At the former garbage land fill decomposition should be completed before the site may be used.

Erosion

No significant impacts will result from implementation of the proposed measures.

SOCIOLOGY

Effects

By implementing the element's programs and policies, loss of life and property will be reduced. New technology in hazard abatement may be incorporated into building and safety codes to further lower the risk level toward acceptable levels.

The element will serve to educate the public to existing hazards. Attracting public attention may speed the legislative process toward an establishment of priorities for hazard abatement and toward providing the prerequisite funding needed to accomplish the task.

Controversy may result from differing views concerning costs versus benefits from various programs. Some members of the community may feel the cost excessive. Others may view the resultant improvements worth the expense. For example, property owners might feel a safety and compliance inspection of their home by a member of the building department an intrusion on their property rights. A buyer might appreciate the added security stemming from the knowledge that he is buying a complying structure.

Mitigating Measures

The adverse impact of costs and questions of limiting legislation will be offset by the overall benefits which will accrue over a period of time as policies are implemented.

ECONOMIC

Effects

Programs setting up inspection of homes at time of sale would require staff augmentation by the Building Department. The cost of inspection would be borne by the seller, the market price of homes would reflect this added expense. If a residence were found to be a structural or fire hazard, considerable costs might be entailed in bringing the building up to code.

Increased municipal services would require additional funding. These include: free, periodic collection of fire hazardous materials; an intensified inspection program; further studies.

Mitigating Measures

If federal disaster aid programs could be realigned to include disaster prevention funding, municipal and private costs might be reduced.

URBAN DEVELOPMENT

Effects

In order to reduce the impact of fire on the urban environment, including high rise buildings, institutions, and areas of public assembly, a two pronged approach is necessary. Fire codes must be strengthened and the excellent program of fire inspections must be continued.

Additional costs may accrue to construction using fill sites. These may come in the form of geologic examinations, excavation and recompaction expenses. As the finite land area available in the city decreases, the pressures of urban development may make these expenditures an acceptable part of land acquisition costs.

Mitigating Measures

The increasing price of land and buildings in Santa Monica will aid property owners to recoup their augmented construction costs.

No other adverse impacts are identified.

HEALTH AND SAFETY

Effects

The whole purpose of the Safety Element is the amelioration of the health and safety of the City's residents. This is to be achieved through enforcement of building and fire codes, and emergency medical system augmented staff and equipment and new ordinances.

The general public will feel the effects of these programs in the form of greater security of environment, if not on a personal level.

Since the element is keyed to improving the quality of health and safety, adverse impacts are excluded by definition.

Mitigating Measures

None are required.

SERVICES

Effects

Increased costs, due to the limited addition of personnel and accouterments is assured. These improvements would reflect themselves in better service. The coupling of preventive efforts with the ability to manage crises response situations will reduce the loss to both life and property.

An effort should be made to teach municipal employees their function under the City's Emergency Plan. Seasoned personnel who know their job would be of valuable service in case of local, state or national emergency. No significant adverse impacts are anticipated.

Mitigating Measures

None are required.

UNAVOIDABLE IMPACTS RESULTING FROM PLAN IMPLEMENTATION

The following negative impacts have been previously identified:

Soil recompaction

Controversy over ordinance additional or division

Irreversible commitment of funds

ALTERNATIVES TO PROPOSED ACTION

As previously noted, four alternatives were considered. These cover the range from "further study" to "considerable action".

Mere intensification of code enforcement was not considered to be a sufficiently effective alternative. Since under this approach some problems would not be given proper consideration, this approach was rejected.

By selecting policies of graduate response which could be combined or used singly, it was determined a wider range of problems could be dealt with. This multifaceted approach allows greater latitude in selecting an appropriate response which lies within the funding and service capabilities of the city.

IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD OCCUR SHOULD THE PROPOSED ACTION BE IMPLEMENTED

Implementation might cause controversy and disruption within the community due to strengthening and alteration of some city codes. The amount of change does not lend it self to quantification at this time.

Implementation of the proposed actions would reduce funding to other worth while programs. Such budgetary reductions could have an irreversible impact on other segments of the community.

GROWTH INDUCING IMPACTS OF THE ACTION

Increased growth is not considered to be a primary impact of implementation. If the quality of life is improved through reduced loss of life and property, then this may serve as a secondary impact leading toward increased growth.

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Adopted by the
CITY COUNCIL OF SANTA MONICA
July 8, 1975

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PUBLIC SAFETY ELEMENT

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ADDENDUM: ENVIRONMENTAL IMPACT REPORT

INTRODUCTION

This Public Safety Element is restricted in its scope to those elements required by state law: fire and geologic hazard. We recognize this is inadequate for a comprehensive General Plan, but in view of the fact such a plan for the City of Santa Monica is in the process of preparation and a comprehensive form of this element must be prepared in conjunction with the other elements of that plan, it is recommended that this limited version be accepted as an interim measure.

AUTHORITY

The Safety Element is a mandatory element of the General Plan as required by state law. California Government Code Section 65302.1 requires a safety element of all city and county plans as follows:

A safety element for the protection of the community from fire and geologic hazards including features necessary for such protection as evacuation routes, peak load water supply requirements, minimum road widths, clearances around structures, and geologic hazard mapping in areas of known geologic hazards.

PURPOSES AND FEATURES

The purpose of the Public Safety Element is to introduce safety considerations into the planning process. By doing this, loss of life, injury, property damage, economic and social dislocation due to the above mentioned hazards may be held to a minimum.

Its objective is to serve as an official guide for the City Council, Planning Commission, Planning Department staff and concerned citizens while working with the two factors identified in this document which affect the public safety of the community.

RELATIONSHIP TO OTHER ELEMENTS

This Safety Element contributes to developing land use standards and policies. These will relate type and intensity of use to the level of risk from fire and geologic hazards to the effect of development upon that risk, and to the availability of services and facilities to combat them.

The Safety Element also contributes basic standards and requirements to the Circulation element, such as minimum street and alley widths for emergency vehicles. Emergency vehicles access will also impact on the Public Facilities Element, and will have important implications for the Open Space and Conservation Elements.

Inasmuch as the Seismic Safety Element contributes information on the comparative safety of using lands for various purposes, types of

structures, and occupancies, it has a very direct and strong relationship with this element.

Because of its relationship to other elements of the General Plan and because that plan is now being revised, this Safety Element will be amended by a Safety and Public Health Element to be included in the new General Plan.

DEFINITIONS

There are basic terms used in this element which require defining:

Acceptable Risk: The level of risk below which no specific action by local government is deemed to be necessary to protect life and property.

Avoidable Risk: Risk not necessary to take because individual or public goals can be achieved by other means without taking the risk.

Fire Hazard: Any condition or circumstance which contributes to the inception or rapid spread of fire.

Geologic Hazard: Geologic activity, other than seismic events, creating an impact on the safety and welfare of the city residents, such as slope instability, general subsidence, differential settling, erosion, tsunami, seiches and other associated problems.

BACKGROUND

FIRE HAZARDS

The urban environment is, by nature, hazardous to some degree. For one, human and structural density increase the first potential. Within this milieu, individual acts of malice or negligence may compound or aggravate the hazards city residents experience to the level of unacceptability.

Fire hazards in the urban environment are as diverse as the number of different human activities engaged in.

Despite the diversity of dangers common to each activity, all urban structures share a single hazard: increasing building density. This trend toward greater structural density raises the possibility of fire hazards that are inherent in compact growth development of a city of geographically finite size.

Since 1970 high density dwelling units have increased enormously. While single family and duplex residences have decreased by 123 units to 12,118 and two to four unit dwellings have dwindled by 381 to 4,067 units, multi-family structures have increased to 26,744 units, a gain of 3,749 units since 1970.

Industrial density, as a whole, has remained stable in recent years. The exception to this stability is the McDonald-Douglas Aircraft facility. While the land use area is, at present intact, the employment level has steadily declined.

There are 41% more high rise buildings today in Santa Monica than there were ten years ago. The additional fifteen buildings (plus two under construction) are indicative of the high density land use prevalent in the city.

Dollar structural loss, due to fire, has averaged \$806,310 annually during the last four years. This is equivalent to a \$9.00 per capita loss for each citizen. This is but one reason why there should be a comprehensive examination of urban fire hazards.

Fire Hazardous Buildings

A fire hazardous building is one in which faulty electrical wiring, substandard or obsolete heating equipment, inadequate building materials, inadequate design or improper use can contribute to the inception and rapid spread of fire.

Buildings which might fall into this category are: residences built prior to the municipal building code of the last 1920's; one to three story commercial structures having open stairwell construction; industrial facilities which lack fire-safe storage for volatile or insufficient fire suppression systems. With the exception of several older high rise structures, there are no serious fire hazardous buildings in the city to the knowledge of the Building and Fire Department personnel. These hazardous buildings are currently being surveyed to assess the need for corrective measures.

Residential Structures

During the last four years, 67% of the structural fires responded to by the Fire Department occurred in residential occupancies.

Causative factors of these fires, in descending order are: heating and cooking equipment; electrical wiring and appliances; smoking; children and matches.

High Rise Structure

High rise may be defined as any tall building whose height or location exceeds the capacity of rescue equipment (e.g. snorkel truck and ladders) to reach trapped victims from the outside. In Santa Monica this includes buildings over seven stories.

Inasmuch as there is a considerable concentration of people in high rise buildings, these structures present the greater potential fire hazard to human life. Consequently, they require the most stringent fire safety measures.

Equipment limitations and tenant unpreparedness plus the design of the building may inhibit rescue and fire suppression efforts. Dependence on implicit safety measures to suppress fires (ventilation, elevator, water and light systems) may themselves fail, thus rendering high rise buildings more vulnerable to fire losses. Also, the failure of communication systems could hinder the search for the trapped.

The Fire and Building Department personnel are currently surveying existing high rise buildings for alternative corrective measures that will be required by state law.

Hospitals and Medical Facilities

The danger of fire to hospitals and convalescent homes is two-fold. One, there is the danger of fire to a large dependent patient population. Even at day time staffing levels, personnel might be hard pressed to effectively evacuate everyone. Second, is the importance of the medical facility surviving fire danger, especially emergency medical facilities. The facility is necessary to the continued welfare of the community; it must be preserved and protected.

To insure efficient action during fire emergencies, the hospitals conduct monthly fire drills for their staff under supervision of the Fire Department. Emergency procedure training for convalescent hospital personnel averages once every six months.

There have been no major fires or casualties in any of the medical facilities in the last ten years. The first that have occurred in these facilities have been limited to small linen or kitchen fires.

Indoor Public Facilities

An indoor public facility is an enclosed structure where large groups of people gather. Such structures include, but are not limited to: entertainment and recreational facilities, churches, schools and lodges. Some of these may have been built prior to adoption of the present fire code and may not conform to present standards of wiring, heating or building design.

A major consideration in dealing with fire hazards in these facilities is mass panic in case of fire. This may be caused by the patrons and the staff not being familiar with emergency exits and procedures, loss of orientation due to smoke or lack of visibility. Thus, a small fire while harmless in itself, if not handled properly may cause great numbers of injuries and loss of life.

Commercial Problems

Santa Monica's central business district encompasses the area from Wilshire to Colorado, Ocean Avenue to Lincoln Boulevard and commercial corridors along Wilshire, Santa Monica, Pico, Ocean Park, Main Street, and Montana Avenue.

Inventory of combustible materials (normal load) in these facilities may tax Fire Department operations. Some buildings have large areas, common attics, common basements, removed walls (due to expansion). A few buildings have had their use curtailed (prohibited occupancy of upper floors) due to older style of constructions.

Industrial Fire Hazards

Santa Monica has a diversified light industrial base characterized by electronics assembly, plastics fabrication, light machine work, advanced research facilities, and other manufacturing, storage and distribution facilities. Those industries employing petroleum or chemicals in their operations represent the most recognizable fire hazards. The industrial plants are generally located in the industrial zones. Outside the zone, they are subject to a conditional use permit from the city. New processes, new industries demand continually improving techniques of fire prevention and suppression.

Water System

The city's water system exceeds nearly all fire suppression requirements. Its limitations do not seriously hinder fire suppression ability. The Insurance Service Office (ISO), an organization which establishes water system standards and evaluates fire suppression capabilities, rates the Santa Monica system a single point below Class 1. Class 1 is the highest rating possible. This high rating can contribute to lower insurance costs for home owners and businesses.

The Water Department maintains a 2 1/2 day water reserve in its reservoirs. The ISO's requirement of a five day reserve supply of water will be met by a proposed Municipal Water District feeder line. This proposed line would fulfill the remaining 2 1/2 day reserve requirements and projected increased needs through 2020 A.D.

Fire Department

Santa Monica's Fire Department serves the city with an excellent rescue-paramedic and fire suppression capability. There are four fire stations in Santa Monica. For a staff breakdown by facility, fire zones and first-in engine company, see Appendix I.

The city's Rescue-Paramedic Program involves coordinated services of the Fire Department, the local private ambulance service and the

Santa Monica Hospital. The program is integrated into a county-wide system and is monitored by the Los Angeles County Department of Health Services.

Initial patient care in the field is administered by the Fire Department paramedic pumper crew. While on call, the paramedics are in radio contact with a doctor at the hospital. Under the doctor's direction, the paramedics begin patient care including the injection of drugs and the defibrillation of heart arrest victims. This degree of treatment has until recently been impossible except in a hospital or doctor's office.

When the initial trauma has been controlled, the victim and paramedics are transported to the emergency hospital in ambulances provided by a private ambulance company. At the hospital the patient is transferred directly into specific intensive care units without the necessity for the time-consuming processing formerly necessary.

GEOLOGICAL HAZARDS

The City of Santa Monica is situated atop the bluffs of a marine terrace which, extending inland, merges with the coastal plain and forms a portion of the Los Angeles Basin. The land can be effected by non-seismic geologic hazards. These include: slope instability on the face of the marine terrace; subsidence in some areas of non-compacted fill, and to a small extent, surface erosion of slopes.

Slope Instability

Slope instability is described as the random sloughing off of soil masses from the face of an otherwise stable geologic mass. There are three basic contributing factors to slope failure: surface and subsurface water, geologic structure, and the slope gradient.

The Palisades Park Bluffs have long been plagued by slope instability, with the first recorded slide taking place in 1930. Damage has usually been confined to reduction in the size of Palisades Park and debris on the Pacific Coast Highway.

The cost of these slides in terms of property or aesthetic loss has been impossible to compute. Neither has the dollar cost to taxpayers for clean up, nor can the cost to motorists stopped or delayed from traveling the highway be determined, but these

potential and eventual costs could be high. The risk, however, is that people will be caught in or by a slide with resulting injury or death.

Subsidence

A gradual lowering of the ground elevation due to a decrease in subsurface pressure is called subsidence. It maybe induced by removal of fluids (oil,water) from the substrata; hydrocompaction (infusion of large amounts of water into essentially dry soils, and the resultant compaction); or, decay and collapse of fill material (organic or inorganic) with a corresponding decrease in surface elevation.

Erosion

Removal of soil from an area and its deposition in another, by wind, water or gravity is called erosion. The effects of erosion are intensified with increase in slope gradient, the narrowing of runoff channels, and by removal of ground cover which leaves the soil unprotected to the elements. The consequent alluvium can deposit silt, sand, gravel, even boulders on streets, in storm drains or around buildings.

Some erosion has been noted on the slopes of property near 26th Street and La Mesa Drive. Mitigating measures have been taken to deal with that problem by the concerned property owners.

Flooding

Areas subject to periodic flooding have been reduced from the seven noted in 1954 to none today. Some of the worst areas were: Georgina and 21st Street; Marine and Dewey and 16th Streets; 26th Street between Marguerita and Montana; Lincoln and Pico; Virginia and Stewart. Flood control systems have since eliminated these streets and intersections as problem areas. The last to be corrected was the intersection at Colorado and 14th Street in 1972. Since that time there have been no significant flood incidents in the city.

Santa Monica Emergency Plan

The city has prepared an emergency plan to safeguard the lives and property of the citizens of Santa Monica in the event of natural and man-made disaster. This plan provides a system of continuing Municipal Government. It specifies procedures to follow for increased readiness in case of disaster. The plan provides: warning systems; a coordinated, county wide broadcasting system for the

public; a centralized direction and control of the emergency organizations; a tie-in to the state wide "911" emergency dialing system to unify disaster reporting efforts.

At present the city lacks a permanent, well-equipped emergency headquarters facility capable of housing requisite personnel for protection against fallout, earthquake, and other disasters according to Federal standards. Also lacking is a centralized communications system.

Emergency preparedness is not only a local, but state responsibility. As with the state wide mutual aid agreements among fire departments, the emergency plan is also keyed to state participation. (California Emergency Plan, Part 1, I.D.G.)

In addition, an emergency evacuation plan has been prepared, should evacuation of the citizenry become necessary.

ASSESSMENT OF PRESENT HAZARD ABATEMENT PROGRAMS

An assessment of existing hazard abatement programs is necessary to determine emergency response capabilities.

FIRE HAZARDS

Different fire hazards require particular suppression techniques to have differing priorities. The following assessment deals with these differences.

Fire Hazardous Buildings

The present inspection program requires an annual inspection of all businesses. At a minimum inspections may be carried out on a spot basis to encourage compliance as often as deemed necessary by Fire Department personnel. Homes and residences of three units or less are not inspected unless a complaint is filed or the owner requests an inspection.

In 1971 an ordinance was passed requiring open stairwells in older residential buildings to be enclosed. Older buildings have had to install smoke sensors and door closers which also reduce fire hazards.

The threat of seriously hazardous buildings has been diminished as a result of continuing inspection by both Fire and Building Departments.

Due to excessive costs and lack of time, it is impossible to inspect every residence even on a periodic basis, the exceptions being a condemned structure or an owner's request for inspection. To alleviate this shortcoming, a request for inspection might become a feature of escrow procedure much like the termite inspection. An Ordinance of this kind is currently before the City Council for consideration.

High Rise Buildings

Multi-story buildings present hazards unique to their construction. In buildings of three stories or less the placement of fire suppression crews and equipment is generally no problem. High rise buildings, even with built-in fire mitigation features, present a greater danger due to the greater numbers of people present in the structure. Not only is it harder to place crews and equipment inside,

but the problem of victim evacuation becomes very difficult. The snorkel equipment has a limited height (seven stories barring building setback) and payload capacity. Fires above the seventh floor are beyond the reach of present exterior rescue equipment. Fire suppression personnel and victims alike would have to rely on smoke towers and/or elevators for escape from fire above this level.

Future rooftop design should confine vent, aerials, and aircraft warning lights to one corner, so as to leave the remainder free for helicopter evacuation of trapped fire victims. High rise owners can satisfy FAA Requirements for helicopter roof top landings by applying for a temporary heliport license.

Consideration should also be given periodically to retroactive legislation governing the mandatory installation of various types of fire preventive and suppressive measures. These might include: smoke sensors, magnetic door closers, fire sprinkler system or other future technological innovations. An ongoing program of practice evacuation should be recurrent in multi-story buildings.

Hospitals and Medical Facilities

Fire training at Saint John's and Santa Monica Hospitals is carried out on a monthly basis. In convalescent hospitals the training averages once every six months. Hospitals and convalescent homes must have emergency backup power generators according to state law. The hospitals in Santa Monica must be built of "class I" materials (concrete, masonry, etc.) to satisfy building codes. Based upon the size of the dependent population, nursing homes are of Type I or Type II construction. Convalescent homes are required to have an indoor fire sprinkler system.

Although both types of facilities are safe, types and qualities of emergency procedures may vary. To insure continued safety, indepth inspections should be continued. Regular fire and disaster drilling keeps the staff prepared for prompt response to actual emergencies.

Indoor Public Facilities and Commercial Structures

These facilities are used by a high density population, who are unfamiliar with evacuation routes or emergency procedures. Therefore, the building must be not only fireproof, but also well designed to speed rapid evacuation in case of emergency. Generally

staff members are not sufficiently trained to constitute a significant secondary disaster relief group.

A conscientious continuing effort should be made toward preparing a facility disaster plan and training for employees to respond in emergency situation.

Industrial Fire Hazards

With few exceptions, the city's industrial facilities have been confined to zones which minimize the potential fire losses. Those located outside these areas do so under existing conditional use permits. These permits provide for the imposition of fire standards on the structure which will reduce the fire hazard to a level of acceptable risk.

Emergency Medical Services

Citizens of any community are subject to various types of life-threatening trauma as the result of accident or sudden illness. Within the City of Santa Monica, several factors are apparent which tend to increase the number of such incidents which can be anticipated. (1) High population density increases the possibility of accident. (2) Traffic congestion and beach-oriented recreation increase the potential for accidents. (3) One of each six residents of the city is 65 years of age and older. The incident rate of sudden trauma associated with heart and circulatory disease is very high in this age group.

The City has for many years provided a program to aid those who are the victims of accident or sudden illness. This program has recently been substantially upgraded by instituting a program of Mobile Intensive Care Units manned by paramedics.

GEOLOGIC HAZARDS

The geologic hazards of concern to Santa Monica are: slope instability, subsidence, and erosion.

Slope Instability

The most recent (1959) exhaustive treatment of the instability of the Palisades Bluffs dealt with slope face failure, major slope failure and graphically represented the underlying geologic structure of the bluffs. Each site of slippage has been mapped.

Since this 1959 report, records of further slide activity have been sketchy. A brief listing between 1957 and 1965 showed five recorded slides and gave the location for each. No further information concerning slide activity could be located, although there has been additional activity since 1965. Up-to-date records could be useful in predicting the location of future slope failure when coupled with other geologic and technical data.

While a number of mitigating alternatives have been considered, almost all have been rejected as not feasible either economically or technically. Although the rapid mass wastage of 500 cubic yards of soil poses a certain hazard, it should be noted that only one fatality in the last 40 years can be directly attributed to slope instability (and that outside the city's jurisdiction).

Subsidence

Subsidence has shown itself to be a hazard on two sites of uncompacted fill within municipal boundaries: the former Higgins Brick Pits and the former Beverly Hills City Dump. Subsidence has also been reported near the older of the two Franklin Hill Reservoirs.

The gaseous results of decomposing waste have seeped through the ground to effect buildings already erected in proximity to the site. Exhaust fans are necessary to remove this noxious gas which has passed through subsoil and foundation walls into the structure.

Erosion

Other than the Palisades Park Bluffs, there is no significant erosion problem in Santa Monica.

A complete geologic mapping program would be an asset to the city. It would assist a number of departments in the performance of their duty.

Flooding

There are no habitual flood zones in the city at present. Areas which might be affected by a severe flood, such as the sewage pumping station, are being improved to function throughout such a crisis.

Santa Monica Emergency Plan

The Emergency Plan is prepared by the city under the direction of the State Office of Emergency Services. The plan deals with mitigating programs, responsibility, procedures and accountability in case of a

disaster such as an earthquake. The role of municipal personnel in such a disaster is also specified.

The lack of adequate emergency headquarters, and the need for a single unified communications system, may provide the opportunity for a combined solution. If a facility, designed to accommodate both, were prepared according to Federal standards for such an installation, Federal monies might be obtained to offset the City's capital expense. A centralized communication system, staffed by trained communications experts could route calls to the appropriate department and at the same time maintain an overview of emergency situation. The City is currently studying this alternative.

The City's Emergency Plan establishes an evacuation plan (page 13) which designates escape corridors to be used in case an emergency is declared either by Federal, State or local authorities. The plan maximizes both coastal and inland streets to accomplish evacuation.

An emergency situation, i.e., earthquake, atomic attack, will place tremendous strains on people and systems. Unless municipal personnel are prepared by practice and with adequate facilities, administration of city government may be exceeded by disaster demands.

GOALS AND OBJECTIVES

Efforts can be productively undertaken to prevent or mitigate the consequences of safety hazards resulting from fire or geologic hazards in Santa Monica. The primary goal of this Safety Element is to provide a physically safe community for the citizens and their possessions as regards fire and geologic hazards and ensure the development and maintenance of facilities and organizations necessary to ensure continued safety.

In order to move towards accomplishing this primary goal, the following objectives are established:

1. Provide quality fire and geologic hazard protection for all residents and visitors in Santa Monica and for business and residential properties.
2. Insure prompt treatment of injured and acutely ill through trained and readily accessible emergency personnel and equipment.
3. Insure that building codes contain adequate measures to prevent fire.

STATEMENT OF POLICIES

Policies must be implemented through present government programs and personnel if the stated goals are to be achieved.

These policies are:

Determine and actively administer standards and criteria to lower risk factors of fire and geologic hazard to tolerable levels.

Seek to better methods for dealing with multi-story and large area buildings with respect to preparedness, rescue, fire prevention and suppression.

Sponsor further investigation of geologic and fire safety.

Investigate and support the use of improved fire suppression and prevention techniques.

Continue to consider safety aspects in approving building permits, conditional use permits, variances, zone changes and Tentative Tract Maps.

Building and Fire codes should be periodically up-dated. The City should encourage participation of its personnel in the conference and committee work necessary to keep new codes abreast of future technological advances and innovations.

STANDARDS AND CRITERIA

Safety standards and criteria are established as a basis for comparison in measuring unacceptable levels of risk. Responsibility for establishing these criteria and standards resides in the City Council. While the State establishes some of these standards, the municipality usually enforces both the State's and its own.

Standards are embodied in various codes and ordinances, such as:

Building code

Fire code

Zoning ordinance

State safety code

Building standards are contained in the building and fire codes. Land development standards are found in the zoning ordinance, the fire and other codes.

Criteria stresses the achievement of excellence or an ideal state beyond a framework of minimum standards. These safety criteria must be decided by members of the City Council.

IMPLEMENTATION PROGRAM

Implementation is accomplished through programs developed in response to adopted policies, ultimately bringing about realization of the stated goals and objectives.

EXISTING PROGRAMS

At different levels of Government various programs for implementing policies, objectives, and goals have been established. These may be divided by jurisdiction as follows:

Municipal

- Building code
- Zoning ordinance
- Fire prevention and suppression
- Taxation
- Contingency disaster plan

State

- Emergency fire and disaster aid plan
- Water distribution projects
- Identification and mapping of geologic hazards
- State funds

Federal

- Revenue Sharing
- United State Geologic Survey Mapping
- Federal Funds

ACTION PROGRAM

Contained in this section are the ongoing action priorities, as well as the short, medium and long range action, needed to fulfill the policies of the Safety Element.

On-Going Action Priorities

By establishing implementational priorities based on identified problems, coordinated with existing programs, the greatest use can be made of present assets and opportunities in resolving safety problems.

Criteria Used in Setting up Priorities

Due to limited assets the city must pinpoint the most crucial problems and act on these first. This action should be based on:

- Clear and present danger to life or property.
- Danger to high density or dependent populations.
- Opportunities, which if not seized, are lost.

On-Going Action Response

- Fire hazardous buildings
- High occupancy structures
- Dependent populations
- Commercial occupancy
- Industrial fire hazards
- Emergency response ability
- Geologic hazards
- Residential fires

ACTION RECOMMENDATIONS

Short Range Recommendations

Public Relations Programs encouraging voluntary fire inspections of single family dwellings and apartments as well as industrial, commercial and other structures. Obtain Council approval to designate special days in each month (instead of annually during the month of May, as at present) for selected geographic areas, when city sanitation trucks will make a special run to pick up anything and dispose of it, thus reducing the fire hazard in each neighborhood.

Recommend that Council pass a requirement for formation of an emergency action plan by owners of structures three stories or more in height. Plans should contain:

Emergency response plan prepared by building manager and submitted to the Fire Chief for review.

Training procedures for the building's tenants that will prepare them to function in consort with fire and police personnel in disaster response.

Institute a program of continuously updating a geologic hazards map for new anomalies. Not only should sites of activity be mapped, but in the case of slides, quantity of debris, duration of cleanup and cost and number of injured should be noted for future reference.

Construct a combined, centralized communications-dispatch system and an emergency shelter facility which meet Federal guidelines.

Medium and Long Range Action Recommendations

Require, through the Building Department, all sites in identified geologically hazardous areas to be certified safe by a soil engineer before a building permit is granted.

Plan and implement a master plan for fire protection. The plan to establish the calculated level of public fire protection to be furnished by the city. The plan will also provide that these structures within the city which, by reason of design, ground area, height, or use, exceed the programmed capability of the fire force, shall be required to install fire limiting features which will reduce the fire potential to the level within the capability of the fire forces.

Governmental Roles and Responsibilities

In order to successfully attain the stated goals of the safety element, the various roles played by each level of government must be identified and assessed.

One of the important responsibilities of municipal government is to identify the safety hazards within its boundaries and take the kind of responsible action only a vital local authority can to ameliorate a situation of unacceptably high risk. This may be accomplished through a vigorous fire prevention program and a building department attuned to an awareness of geologic hazards and a possible program of mitigation measures.

Other communities can provide additional fire suppression equipment and personnel in the event of a major fire or other disaster which might exceed the capacity of Santa Monica's municipal forces.

The state has set forth guidelines for mutual aid agreements between communities to augment their disaster response abilities. The state has a quick response structure organized to provide maximum utilization of available manpower and material in case of major fire disasters.

The federal government's major opportunities lie in its ability to aid, through revenue sharing. Federal guidelines are embodied in FHA and VA requirements and through an information dissemination service.

Constraints, Capabilities and Feasibilities

The above considerations must be taken into account in order to achieve implementation of the element.

Constraints

Legal limitations on the city's authority to implement some policies.

Limit on funds available to pay for corrective programs.

Opposition to new programs which might effect property values or maintenance costs.

Diverging views of just what constitutes levels of acceptable risk.

Capabilities

Technical competence for hazard problem resolution or mitigation.

Excellently manned and equipped fire suppression and rescue resources.

Wide public knowledge of disasters which have destroyed lives and property.

Feasibility

The frame work for public safety improvement already exists. Politically and socially the advantages of these programs are well recognized. Most of the proposed action could be implemented through the existing programs and so avoid the high cost of beginning a new program.

Success of implementation rests on the mutual awareness and cooperation of the different concerned departments. By establishing priorities which coincide in time and type of implementation, the concentrated efforts of many departments can be brought to bear on a single problem in a coordinated, unified fashion.

Costs of Funding

Both private and public sectors will be affected by the implementation of this element. The cost of additional manpower for the Fire Prevention Bureau, Building Department and other involved departments would be the greatest outlay of new funds. A rearrangement of priorities would cover some of the cost with the rest coming from tax revenues, revenue sharing, community

development funds and federal grants. Exact costs have not been figured for want of specific program information.

The private costs of implementation would be borne by those most affected, generally, the owners of properties, requiring added protection. Perhaps low or non-interest notes funded by revenue sharing might help offset the cost of meeting any new standards imposed on existing properties.

FIRE DEPARTMENT

1	Fire Chief
5	Battalion Chiefs
20	Fire Captains
18	Engineers
46	Firemen
5	Dispatchers
1	Fire Alarm Supervisor
1	Mechanic Foreman
2	Secretaries

Personnel requirements demand 3 1/4 men for each fire fighting position on a 24 hours basis.

Headquarters at 1444 - 7th Street houses:

1	Pumper Company - Paramedic capability
1	Snorkel Unit
1	Ladder Company
1	Utility Vehicle (Rescue & Salvage)
	Fire Chief
	Fire Prevention Bureau Staff
	Secretarial Staff

220 Hollister houses:

1	Pumper Company - Paramedic capability, April 1975
1	Mechanic

1302 - 19th Street houses:

1	Pumper Company - Paramedic Capability
1	Ladder Company

2502 - 25th Street houses:

1	Pumper Company
1	Aircraft Crash Unit

In order to assure minimum response time (from alarm to arrival), the Fire Department has established 11 running districts. These districts specify which station is responsible for sending the first "on the scene" company of fire fighters and which sends the second or backup company.

To reduce the impact of fire to a minimum, the city has been divided into three fire zones. These govern types of construction material used in each zone. Zone I requires use of steel, concrete or masonry and fire doors, for example. Zone III is residential and allows stucco or frame construction, no fire doors required.

APPENDIX 1

SUMMARY

The purpose of this Environmental Impact Report (EIR) is to identify courses of action which may effect our living space in a detrimental fashion.

The EIR suggests alternative courses of action which may reduce negative impacts.

It also deals with irreversible impacts which occur, should the proposed action be implemented.

Finally, it identifies the growth inducing impacts of the proposed action.

Section 65302 of the California Government Code mandates four new elements to the General Plan Process. One of these is in the Public Safety Element. This element attempts to designate known fire and nonseismic geologic hazards. Having identified these hazards, policies and goals are established to provide a cohesive program of hazard abatement. While these programs are designed to ameliorate the quality of life and reduce risks to life and property, they may inadvertently have an impact on our environment. This Environmental Impact Report will attempt to assess the results of hazard abatement program implementation and identify short and long term effects which may result.

The Public Safety Element is inherently general in its nature due to the comprehensive approach it takes. It therefore need only be accompanied by an environmental impact report containing the same degree of specificity.

METHODOLOGY

It was first necessary to identify and weigh the influence that potential growth might have on the safety and development of the suggested programs of hazard abatement. Four alternative policy sets were selected on a basis of degree of improvement to the total safety framework. "No action" was considered and adopted only on a contingency of further study. It is doubtful that the city can achieve a status of total elimination of all safety hazards.

In designating policies the three considerations were:

Extent of problem to be resolved.

Degree of action necessary to mitigate the problem.

Feasibility of proposed action.

II. ENVIRONMENTAL SETTING

OVERVIEW

Santa Monica's topography is that of an elevated marine terrace. Demarcation is sharpest where the terrace rises from the shore to form the bluffs of Palisades Park. Inland and to the north the land slopes upward in a mild gradient to the highest point in the city, elevation 374.4 feet - 114.1 m.

The ocean moderates the climate of Santa Monica. On any given summer day this local may be 10-15F cooler than the inland portion of the Los Angeles Basin. Santa Monica's proximity to the ocean helps it maintain relatively warmer weather during the winter months.

This "Mediterranean" climate has contributed to the choice, by many, of Santa Monica as a place of residence. As a result the city has experienced a steady growth in population. Once a city of primarily single family residences, Santa Monica's housing patterns have altered. Now there are not only large numbers of apartments, but also condominiums are becoming more prevalent. These and other factors indicate intensified land use in the city's way of responding to finite boundaries and increasing population.

Land ownership has become correspondingly more expensive as competition for available land increased. This augmented level of affluence maybe more fully tapped by the city merchants as the additional facilities of the new mall become available. The capturing of a larger share of the goods and services market by Santa Monica will mean that dollars spent here will contribute to greater employment and prosperity of the city's inhabitants.

III. ENVIRONMENTAL IMPACT STATEMENT

This rather terse look at the city shows it to be a vital community, economically and socially. There is potential for growth which, if guided could lead to an improved environment for all.

REGIONAL SETTING

Santa Monica participates in a voluntary association of local governments known as Southern California Association of Governments(SCAG). SCAG acts as a coordinating device among municipal and county governments and as a regional clearing house for some federal funds and programs. Transportation planning is currently one of SCAG's chief concerns.

THE ENVIRONMENTAL IMPACT OF THE PROPOSED ACTIONS

This section will deal with the proposed policies and programs of the safety elements and their direct or indirect impact on the environment of Santa Monica. The scope of possible impact considers the areas of: landforms, sociology, economic, urban development, health/safety, and services. The following measures do not exceed that which is required to insure safety. Extensive cost prohibits excessive safety measures.

LANDFORMS

Slope failure (referring to the bluffs of Palisades Park)
No significant impact will result from implementation of the proposed measures. Further study is required.

Subsidence

In areas of non-compacted fill, no construction should be undertaken unless and until mitigation measures have rendered the site safe.

Mitigating Measures

Loose fill must be excavated and recompacted before construction may begin. At the former garbage land fill decomposition should be completed before the site may be used.

Erosion

No significant impacts will result from implementation of the proposed measures.

SOCIOLOGY

Effects

By implementing the element's programs and policies, loss of life and property will be reduced. New technology in hazard abatement may be incorporated into building and safety codes to further lower the risk level toward acceptable levels.

The element will serve to educate the public to existing hazards. Attracting public attention may speed the legislative process toward an establishment of priorities for hazard abatement and toward providing the prerequisite funding needed to accomplish the task.

Controversy may result from differing views concerning costs versus benefits from various programs. Some members of the community may feel the cost excessive. Others may view the resultant improvements worth the expense. For example, property owners might feel a safety and compliance inspection of their home by a member of the building department an intrusion on their property rights. A buyer might appreciate the added security stemming from the knowledge that he is buying a complying structure.

Mitigating Measures

The adverse impact of costs and questions of limiting legislation will be offset by the overall benefits which will accrue over a period of time as policies are implemented.

ECONOMIC

Effects

Programs setting up inspection of homes at time of sale would require staff augmentation by the Building Department. The cost of inspection would be borne by the seller, the market price of homes would reflect this added expense. If a residence were found to be a structural or fire hazard, considerable costs might be entailed in bringing the building up to code.

Increased municipal services would require additional funding. These include: free, periodic collection of fire hazardous materials; an intensified inspection program; further studies.

Mitigating Measures

If federal disaster aid programs could be realigned to include disaster prevention funding, municipal and private costs might be reduced.

URBAN DEVELOPMENT

Effects

In order to reduce the impact of fire on the urban environment, including high rise buildings, institutions, and areas of public assembly, a two pronged approach is necessary. Fire codes must be strengthened and the excellent program of fire inspections must be continued.

Additional costs may accrue to construction using fill sites. These may come in the form of geologic examinations, excavation and recompaction expenses. As the finite land area available in the city decreases, the pressures of urban development may make these expenditures an acceptable part of land acquisition costs.

Mitigating Measures

The increasing price of land and buildings in Santa Monica will aid property owners to recoup their augmented construction costs.

No other adverse impacts are identified.

HEALTH AND SAFETY

Effects

The whole purpose of the Safety Element is the amelioration of the health and safety of the City's residents. This is to be achieved through enforcement of building and fire codes, and emergency medical system augmented staff and equipment and new ordinances.

The general public will feel the effects of these programs in the form of greater security of environment, if not on a personal level.

Since the element is keyed to improving the quality of health and safety, adverse impacts are excluded by definition.

Mitigating Measures

None are required.

SERVICES

Effects

Increased costs, due to the limited addition of personnel and accouterments is assured. These improvements would reflect themselves in better service. The coupling of preventive efforts with the ability to manage crises response situations will reduce the loss to both life and property.

An effort should be made to teach municipal employees their function under the City's Emergency Plan. Seasoned personnel who know their job would be of valuable service in case of local, state or national emergency. No significant adverse impacts are anticipated.

Mitigating Measures

None are required.

UNAVOIDABLE IMPACTS RESULTING FROM PLAN IMPLEMENTATION

The following negative impacts have been previously identified:

Soil recompaction

Controversy over ordinance additional or division

Irreversible commitment of funds

ALTERNATIVES TO PROPOSED ACTION

As previously noted, four alternatives were considered. These cover the range from "further study" to "considerable action".

Mere intensification of code enforcement was not considered to be a sufficiently effective alternative. Since under this approach some problems would not be given proper consideration, this approach was rejected.

By selecting policies of graduate response which could be combined or used singly, it was determined a wider range of problems could be dealt with. This multifaceted approach allows greater latitude in selecting an appropriate response which lies within the funding and service capabilities of the city.

IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD OCCUR SHOULD THE PROPOSED ACTION BE IMPLEMENTED

Implementation might cause controversy and disruption within the community due to strengthening and alteration of some city codes. The amount of change does not lend it self to quantification at this time.

Implementation of the proposed actions would reduce funding to other worth while programs. Such budgetary reductions could have an irreversible impact on other segments of the community.

GROWTH INDUCING IMPACTS OF THE ACTION

Increased growth is not considered to be a primary impact of implementation. If the quality of life is improved through reduced loss of life and property, then this may serve as a secondary impact leading toward increased growth.

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